

PROPOSED USE OF THE PLENARY POWERS TO VALIDATE THE
SPECIFIC NAME " VERRUCOSA " SARS, 1901, AS PUBLISHED
IN THE COMBINATION " ALONA VERRUCOSA " (CLASS
CRUSTACEA, ORDER CLADOCERA)

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The object of the present application is to ask the International Commission to provide a firm nomenclatorial basis for the specific name *verrucosa* Sars, 1901, as published in the combination *Alona verrucosa* (Class Crustacea, Order Cladocera). This is a common pan-tropical species, the name currently used for which is invalid as a junior homonym of an identical name previously published by Lutz. The reason why the validation of the specific name *verrucosa* Sars is particularly to be desired is that, as is shown below, if this name were to be rejected, there is no name which would clearly be applicable to this well-known species, there being three other names which might be subjectively applied to it by specialists. There would therefore be a continuing prospect of instability and confusion in the nomenclature of this species. The facts of this case are set out briefly below.

2. In 1901 (: 56, pl. IX, figs. 7, 7a) Sars described a species of Cladocera to which he applied the name *Alona verrucosa*. This species is allied to, but is accepted as distinct from, *Alona rectangula* Sars, 1862 (: 278). This latter species is now better understood than formerly, having been defined and redescribed by Jenkin in 1934. It has since been recorded by Brehm (1937) who has identified a number of other nominal species with it.

3. Unfortunately, in 1879 (: 44) Lutz established a nominal species *Alona verrucosa* which cannot be identified with certainty. It is possible that the species so named is the same as that to which later Sars gave an identical name, but it is probable that it is not. The name *Alona verrucosa* Lutz must be regarded as being a *nomen dubium*, for its interpretation is likely to differ from one author to another. These differences of opinion are likely to give rise to considerable confusion, unless the Commission intervenes, since the name *verrucosa* is likely to be applied by some authors to the common species with which the present application is concerned (i.e. to *verrucosa* Sars) though with Lutz treated as the author, while other authors may be expected to apply what they consider to be the next junior synonym to Sars' species.

4. There are two nominal species which were described prior to the publication of the name *A. verrucosa* Sars, which it is possible are the same as Sars' species. These are: (1) *Alona pulchra* Hellich, 1874 (: 215, 219) and (2) *Alona tuberculata* Hudendorf, 1876 (: 54, pl. II, fig. 6). The second of these names need not detain us, for it is invalid, being a junior homonym of *Alona tuberculatus* Kurz, 1874 (itself, a subjective junior synonym of *Alona guttata* Sars, 1862). The nominal species *Alona pulchra* Hellich is of uncertain identity. Some of the taxa referred to this species show strong resemblance to *verrucosa* Sars, but Brehm (1933a) has pointed out that Hellich's species is in reality quite distinct. Thus, the name *Alona pulchra* Hellich must be regarded as a *nomen dubium* and one moreover which, unless suppressed by the Commission, is likely to give rise to confusion through being applied to the Sars' *verrucosa* by those authors who reject Sars' name as a junior homonym of *verrucosa* Lutz.

5. Another name which might be applied to *verrucosa* Sars by authors who reject that name as a junior homonym of *verrucosa* Lutz, is *alonopsiformis* Brehm, 1933, as published in the combination *Alona alonopsiformis*. Brehm himself (1937) considers this to be identical with *Alona verrucosa* Sars.

6. A further difficulty and source of possible confusion arises from the fact that in 1905 Daday established a nominal species *Alona anodonta*, which it is possible is identical with *Alona verrucosa* Sars. However, according to Daday, his species lacks the teeth on the labrum which is one of the distinguishing features of *verrucosa* Sars. The question whether these two nominal species represent the same taxon is thus very much a matter of opinion. Brehm (1933a; 1937), for example, does not identify these nominal species with one another.

7. It will be seen, therefore, that, if the name *Alona verrucosa* Lutz were to be permitted to retain its status as an available name, the species now known as *Alona verrucosa* Sars, 1901, might, according to the the subjective taxonomic judgments by individual workers, appear in the literature under any one of no less than four following specific names: (1) *verrucosa* Lutz, 1879; (2) *anodonta* Daday, 1905; (3) *alonopsiformis* Brehm, 1933; or even (4) *pulchra* Hellich, 1874. If, on the other hand the two *nomina dubia* here in question, namely (a) *pulchra* Hellich and (b) *verrucosa* Lutz, were to be suppressed by the Commission under its Plenary Powers, all possible source of confusion would be removed. So far, the species described by Sars as *verrucosa* has been known only by that name and no confusion exists, but, as has been shown, that name at present possesses no solid legal foundation. It is to provide that name with such a foundation and to prevent the confusion which would arise if an attempt were to be made to reject it on any of the grounds described above that the present application is submitted to the Commission.

8. For the sake of completeness it would be helpful if, when dealing with the present application, the Commission were at the same time to place on the *Official List of Generic Names in Zoology* the name *Alona* Baird, 1843 (*Ann. Mag. nat. Hist.* 11 : 92) that being the name of the genus to which the species discussed in the present application are referred. The genus *Alona* Baird is commonly treated as being typified by the nominal species *Lynceus quadrangularis* Müller (O.F.), 1785 (: 199, pl. IX, figs. 1-3) and it has sometimes been suggested that this species was actually so selected by Lilljeborg (1900, *Cladocera Sueciae* : 446, footnote). Reference to Lilljeborg's work shows, however, that "rigidly construed" (as required by Rule (g) in Article 30 of the *Règles*) Lilljeborg did not select the above to be the type species of *Alona* Baird, all that he did being to cite it "als ein typischer Vertreter" of the genus. I have been unable to trace in the literature any valid type selection for the genus *Alona* Baird and Dr. J. P. Harding (*British Museum (Natural History), London*), whom I have consulted, informs me that he also is unaware of any such selection. On his suggestion and in order to bring this issue to a close I now here select the nominal species *Lynceus quadrangularis* Müller (O.F.), 1785, to be the type species of the genus *Alona* Baird.

9. In 1860 (: 221, pl. VIII, fig. 59) Leydig published the name *Lynceus quadrangularis* as the name for an entirely different species from that to which this name had been given by Müller in 1785. Fourteen years later Kurz in 1874 established the nominal genus *Leydigia* (: 57) and designated *Lynceus quadrangularis* Leydig, 1860, as type species. As already noted, that specific name is a junior primary homonym of the name *Lynceus quadrangularis* Müller, 1785, and is therefore invalid. This nominal species was re-named *Alona leydigi* by Schödler in 1863 (: 27). I am informed by the Secretary to the Commission that under a recent decision embodied in *Declaration* 21 (now in the press¹) the Commission has ruled that, where one of two or more objectively identical nominal species is designated, indicated or selected as the type species of a genus, that genus shall be cited as having as its type species the oldest established of the nominal species concerned. Since the nominal species *Lynceus quadrangularis* Leydig, 1860, and *Alona leydigi* Schödler, 1863, are objectively identical with one another (Schödler's name *leydigi* having been published as a substitute for the invalid name *quadrangularis* Leydig), it follows that under the *Declaration* referred to above it is the nominal species *Alona leydigi* Schödler, 1863, and not the nominal species *Lynceus quadrangularis* Leydig, 1860, which is to be treated as being the type species of *Leydigia* Kurz, 1874. It is recommended that the present opportunity should be taken to place the names *Leydigia* Kurz and *leydigi* Schödler on the *Official Lists* of valid generic and specific names respectively and the name *quadrangularis* Leydig on the *Official Index of Rejected and Invalid Specific*

¹ The *Declaration* here referred to was published on 19th June, 1956 (*Ops. Decls. int. Comm. zool. Nomencl.* 12 : i-viii).

Names in Zoology. In order fully to cover all aspects of the present case it would be desirable also that the generic name *Lynceus* Müller (O.F.), 1776 (*Zool. dan. Prodr.* : xxvii, 199) (Class Crustacea, Order Conchostraca) should be placed on the *Official List of Generic Names in Zoology* with *Lynceus brachyurus* Müller (O.F.), 1776 (*ibid.* : 199) as type species by selection by Latreille, 1810 (*Consid. gén. Ordre nat. Anim. Classes Arachn. Crust. Ins.* : 421, 91). At the same time the specific name *brachyurus* Müller, 1776, as published in the above combination, should be placed on the *Official List of Specific Names in Zoology*. Finally, the name *Lynceus* Gray (J.E.), 1821 (*London med. Repository* 15 : 302) (Class Mammalia), should, as a junior homonym of *Lynceus* Müller (O.F.), 1776, be placed on the *Official Index of Rejected and Invalid Generic Names in Zoology*.

10. Neither the generic name *Alona* Baird nor the name *Leydigia* Kurz has been taken as the base for a family-group name. No family-group-name problem therefore arises, so far as the names of genera of the Cladocera dealt with in the present application are concerned. The generic name *Lynceus* Müller, 1776 (Order Conchostraca) was, however, taken as the base for the name of a family-group taxon by Sayce (O.A.), in 1902 (*Proc. Roy. Soc. Victoria* (n.s.) 15 : 257). The family-group name LYNCEIDAE Sayce, 1902, should now be placed on the *Official List*.

11. For the reasons explained above, I ask the International Commission on Zoological Nomenclature :—

(1) to use its Plenary Powers to suppress :—

(a) the under-mentioned specific name for the purposes both of the Law of Priority and of the Law of Homonymy : *verrucosa* Lutz, 1879, as published in the combination *Alona verrucosa* ;

(b) the under-mentioned specific name for the purposes of the Law of Priority but not for those of the Law of Homonymy : *pulchra* Hellich, 1874, as published in the combination *Alona pulchra* ;

(2) to place the under-mentioned generic names on the *Official List of Generic Names in Zoology* :—

(a) *Alona* Baird, 1843 (gender : feminine) (type species, by selection in paragraph 8 of the present application : *Lynceus quadrangularis* Müller (O.F.), 1785) (Class Crustacea, Order Cladocera) ;

(b) *Leydigia* Kurz, 1874 (gender : feminine) (type species by original designation of *Lynceus quadrangularis* Leydig, 1860, and through Declaration 21 : *Alona leydigi* Schödler, 1863 (a substitute nominal species for *Lynceus quadrangularis* Leydig, 1860, the name of which is invalid as a junior primary homonym of *Lynceus quadrangularis* Müller (O.F.), 1785)) (Class Crustacea, Order Cladocera) ;

- (c) *Lynceus* Müller (O.F.), 1776 (gender : masculine) (type species, by selection by Latreille (1810) : *Lynceus brachyurus* Müller (O.F.), 1776) (Class Crustacea, Order Conchostraca) ;
- (3) to place the under-mentioned specific names on the *Official List of Specific Names in Zoology* :—
- (a) *verrucosa* Sars, 1901, as published in the combination *Alona verrucosa*, as validated under the Plenary Powers under (1)(a) above ;
- (b) *rectangula* Sars, 1862, as published in the combination *Alona rectangula* ;
- (c) *quadrangularis* Müller (O.F.), 1785, as published in the combination *Lynceus quadrangularis* (specific name of type species of *Alona* Baird, 1843) ;
- (d) *leydigi* Schödler, 1863, as published in the combination *Alona leydigi* (specific name of type species of *Leydigia* Kurz, 1874) ;
- (e) *brachyurus* Müller (O.F.), 1776, as published in the combination *Lynceus brachyurus* (specific name of type species of *Lynceus* Müller (O.F.), 1776) ;
- (4) to place the under-mentioned generic name on the *Official Index of Rejected and Invalid Generic Names in Zoology* : *Lynceus* Gray (J.E.), 1821 (a junior homonym of *Lynceus* Müller (O.F.), 1776) ;
- (5) to place the under-mentioned specific names on the *Official Index of Rejected and Invalid Specific Names in Zoology* :—
- (a) the two specific names specified in (1) above, as there respectively suppressed under the Plenary Powers ;
- (b) *tuberculata* Hudendorff, 1876, as published in the combination *Alona tuberculata* (a junior primary homonym of *tuberculata* Kurz, 1874, as published in the combination *Alona tuberculata*) ;
- (c) *quadrangularis* Leydig, 1860, as published in the combination *Lynceus quadrangularis* (a junior primary homonym of *quadrangularis* Müller (O.F.), 1785, as published in the combination *Lynceus quadrangularis*)];
- (6) to place the under-mentioned family-group name on the *Official List of Family-Group Names in Zoology* : LYNCEIDAE Sayce (O.A.), 1902 (type genus : *Lynceus* Müller (O.F.), 1776).

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